



## **DEPARTMENT OF TRANSPORTATION**

### **National Highway Traffic Safety Administration**

#### **Petition for Exemption from the**

#### **Federal Motor Vehicle Theft Prevention Standard;**

#### **Toyota Motor North America, Inc.**

**AGENCY:** National Highway Traffic Safety Administration, Department of Transportation (DOT).

**ACTION:** Grant of petition for exemption.

**SUMMARY:** This document grants in full the Toyota Motor North America, Inc.'s, (Toyota) petition for an exemption of the Avalon vehicle line. This petition is granted because the agency has determined that the antitheft device to be placed on the line as standard equipment is likely to be as effective in reducing and deterring motor vehicle theft as compliance with the parts-marking requirements of the Federal Motor Vehicle Theft Prevention Standard (Theft Prevention Standard).

**DATES:** The exemption granted by this notice is applicable beginning with the 2019 model year (MY).

**FOR FURTHER INFORMATION CONTACT:** Hisham Mohamed, International Policy, Fuel Economy and Consumer Programs, NHTSA, W43-437, 1200 New Jersey Avenue, S.E., Washington, D.C. 20590. Mr. Mohamed's phone number is (202) 366-0307. His fax number is (202) 493-2990.

**SUPPLEMENTAL INFORMATION:** In a petition dated June 19, 2017, Toyota requested an exemption from the parts-marking requirements of the Theft Prevention Standard for the Avalon vehicle line beginning with MY 2019. The petition requested an exemption from parts-marking pursuant to 49 CFR Part 543, Exemption from Vehicle Theft Prevention Standard, based on the installation of an antitheft device as standard equipment for the entire vehicle line.

Under 49 CFR Part 543.5(a), a manufacturer may petition NHTSA to grant an exemption for one vehicle line per model year. In its petition, Toyota provided a detailed description and diagram of the identity, design, and location of the components of the antitheft device for the Avalon vehicle line. Toyota stated that its MY 2019 Avalon vehicle line will be installed with a “smart entry and start” system and an engine immobilizer as standard equipment. Key components of the “smart entry and start” system device on the Avalon vehicle line will include, a certification electronic control unit (ECU), engine switch, steering lock ECU, security indicator, door control receiver, electrical key, an engine immobilizer and an electronic control module (ECM). Toyota stated that there will also be position switches installed on the vehicle to protect the hood and doors from unauthorized tampering/opening. Toyota further explained that locking the doors can be accomplished through use of a key, wireless switch or its smart entry system, and that unauthorized tampering with the hood or door without using one of these methods will cause the position switches to trigger its antitheft device to operate. Toyota stated that it will not incorporate an audible and visual alarm system as standard equipment on its trim-line vehicles.

Toyota’s submission is considered a complete petition as required by 49 CFR 543.7 in that it meets the general requirements contained in §543.5 and the specific content requirements

of §543.6.

In addressing the specific content requirements of §543.6, Toyota provided information on the reliability and durability of its proposed device. To ensure reliability and durability of the device, Toyota conducted tests based on its own specified standards. Toyota provided a detailed list of the tests conducted (i.e., high and low temperature operation, overvoltage, strength, impact, vibration, electro-magnetic interference, etc.). Toyota stated that it believes that its device is reliable and durable because it complied with its own specific design standards and the antitheft device is installed on other vehicle lines for which the agency has granted a parts-marking exemption. As an additional measure of reliability and durability, Toyota stated that its vehicle key cylinders are covered with casting cases to prevent the key cylinder from easily being broken. Toyota further explained that there are approximately 10,000 combinations for inner cut keys which makes it difficult to unlock the doors without using a valid key because the key cylinders would spin out and cause the locks to not operate.

Toyota stated that its “smart entry and start system” device is activated when the engine switch is pushed from the “ON” ignition status to any other status. The certification ECU then performs the calculation for the immobilizer and the immobilizer signals the ECM to activate the device. Toyota also stated that key verification is also performed after the driver pushes the engine switch. Specifically, after the driver pushes the engine switch, the certification ECU and steering lock ECU receive confirmation of a valid key, and the certification ECU allows the ECM to start the engine. Toyota also stated that in the “smart entry and start system” installed vehicle, a security indicator notifies the users and others inside and outside the vehicle with the status of the immobilizer. Toyota further explained that the security indicator flashes

continuously when the immobilizer is activated, and turns off when it is deactivated.

Toyota stated that the proposed antitheft device has also been installed as standard equipment on its Avalon vehicle line beginning with its MY 2015 vehicles. The theft rate for the MY 2015 Avalon vehicle line is not available. However, Toyota compared its proposed device to other devices NHTSA has determined to be as effective in reducing and deterring motor vehicle theft as would compliance with the parts-marking requirements. Toyota compared its proposed device to that which has been installed on the Nissan Altima and granted a parts-marking exemption from 49 CFR Part 541 by the agency beginning with its MY 2000 vehicles. Toyota also referenced the NHTSA theft rate data published for several years before and after the Nissan Altima was equipped with a standard immobilizer device. Specifically, Toyota stated that the publication showed that the average theft rate for the Nissan Altima dropped to 3.0 per 1,000 cars produced between MY's 2000-2006 compared to 5.3 per 1,000 cars produced between MY's 1996-1999. This represents approximately a 43% decrease in the theft rate for the Nissan Altima vehicle line installed with an immobilizer between MY's 2000- 2006 as compared to the Nissan Altima vehicle line without an immobilizer between MY's 1996-1999. The theft rates for the Nissan Altima vehicle line using an average of three model years' data (2012- 2014) are 2.4207, 1.7598 and 2.1212 respectively, all well below the median theft rate of 3.5826. Therefore, Toyota has concluded that the antitheft device proposed for its Avalon vehicle line is no less effective than those devices on the lines for which NHTSA has already granted full exemption from the parts-marking requirements. Toyota stated that it believes that installing the immobilizer device as standard equipment reduces the theft rate for the Avalon vehicle line and

expects it to experience comparable effectiveness and ultimately be more effective than parts-marking labels.

Based on the supporting evidence submitted by Toyota on its device, the agency believes that the antitheft device for the Avalon vehicle line is likely to be as effective in reducing and deterring motor vehicle theft as compliance with the parts-marking requirements of the Theft Prevention Standard (49 CFR 541). The agency concludes that the device will provide four of the five types of performance listed in §543.6(a)(3): promoting activation; preventing defeat or circumvention of the device by unauthorized persons; preventing operation of the vehicle by unauthorized entrants; and ensuring the reliability and durability of the device.

Pursuant to 49 U.S.C. 33106 and 49 CFR 543.7 (b), the agency grants a petition for exemption from the parts-marking requirements of Part 541, either in whole or in part, if it determines that, based upon substantial evidence, the standard equipment antitheft device is likely to be as effective in reducing and deterring motor vehicle theft as compliance with the parts-marking requirements of Part 541. The agency finds that Toyota has provided adequate reasons for its belief that the antitheft device for the Avalon vehicle line is likely to be as effective in reducing and deterring motor vehicle theft as compliance with the parts-marking requirements of the Theft Prevention Standard (49 CFR Part 541). This conclusion is based on the information Toyota provided about its device.

For the foregoing reasons, the agency hereby grants in full Toyota's petition for exemption for the Avalon vehicle line from the parts-marking requirements of 49 CFR Part 541. The agency notes that 49 CFR Part 541, Appendix A-1, identifies those lines that are exempted from the Theft Prevention Standard for a given model year. 49 CFR Part 543.7(f) contains

publication requirements incident to the disposition of all Part 543 petitions. Advanced listing, including the release of future product nameplates, the beginning model year for which the petition is granted and a general description of the antitheft device is necessary in order to notify law enforcement agencies of new vehicle lines exempted from the parts-marking requirements of the Theft Prevention Standard.

If Toyota decides not to use the exemption for this line, it should formally notify the agency. If such a decision is made, the line must be fully marked according to the requirements under 49 CFR Parts 541.5 and 541.6 (marking of major component parts and replacement parts).

NHTSA notes that if Toyota wishes in the future to modify the device on which this exemption is based, the company may have to submit a petition to modify the exemption. Part 543.7(d) states that a Part 543 exemption applies only to vehicles that belong to a line exempted under this part and equipped with the antitheft device on which the line's exemption is based. Further, Part 543.9(c)(2) provides for the submission of petitions "to modify an exemption to permit the use of an antitheft device similar to but differing from the one specified in that exemption."

The agency wishes to minimize the administrative burden that Part 543.9(c)(2) could place on exempted vehicle manufacturers and itself. The agency did not intend in drafting Part 543 to require the submission of a modification petition for every change to the components or design of an antitheft device. The significance of many such changes could be *de minimis*. Therefore, NHTSA suggests that if the manufacturer contemplates making any changes, the effects of which might be characterized as *de minimis*, it should consult the agency before preparing and submitting a petition to modify.

Issued in Washington, DC under authority delegated in 49 CFR 1.95

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Raymond R. Posten,  
Associate Administrator for Rulemaking.

**BILLING CODE: 4910-59-P**

[FR Doc. 2017-22657 Filed: 10/18/2017 8:45 am; Publication Date: 10/19/2017]